# LNA4905L

## GaAlAs Infrared Light Emitting Diode

For optical control systems

### ■ Features

- High-power output, high-efficiency: $P_O$ = 15 mW (min.)
- Fast response and high-speed modulation capability: $f_C$ = 30 MHz (typ.)
- Transparent epoxy resin package

### ■ Absolute Maximum Ratings $T_a$ = 25°C

| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| Power dissipation | $P_D$ | 190 | mW |
| Forward current | $I_F$ | 100 | mA |
| Pulse forward current * | $I_{FP}$ | 1 | A |
| Reverse voltage | $V_R$ | 3 | V |
| Operating ambient temperature | $T_{opr}$ | –25 to +85 | °C |
| Storage temperature | $T_{stg}$ | –30 to +100 | °C |

Note) *: f = 100 Hz, Duty cycle = 0.1%

### ■ Electrical-Optical Characteristics $T_a$ = 25°C±3°C

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Radiant power | $P_O$ | $I_F$ = 50 mA | 15 | | | mW |
| Reverse current | $I_R$ | $V_R$ = 3 V | | | 10 | μA |
| Forward voltage | $V_F$ | $I_F$ = 100 mA | | 1.7 | 2.1 | V |
| Peak emission wavelength | $\lambda_P$ | $I_F$ = 50 mA | | 880 | | nm |
| Spectral half band width | $\Delta\lambda$ | $I_F$ = 50 mA | | 50 | | nm |
| Half-power angle | θ | The angle when the radiant power is halved. | | 15 | | ° |

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7031 measuring methods for diodes.

2. Cutoff frequency: 30 MHz

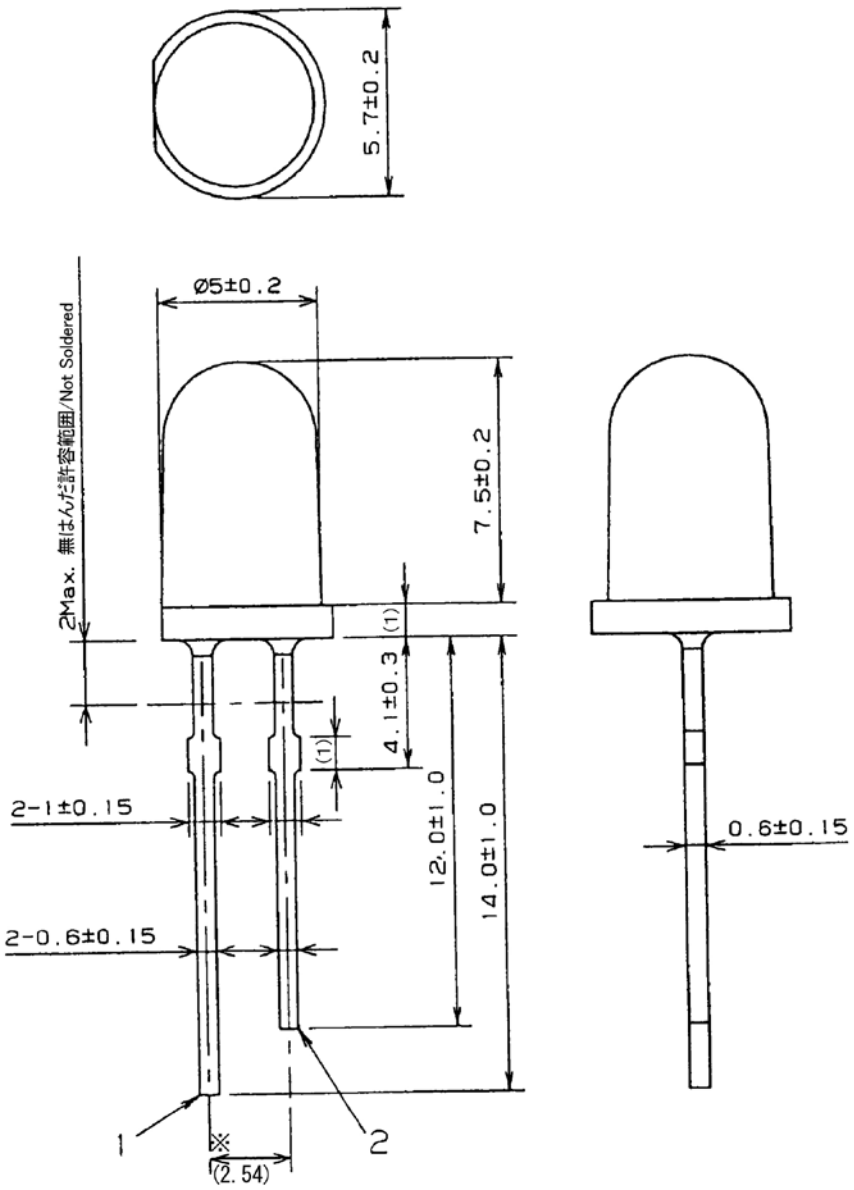
$$f_C : 10 \times \log \frac{P_O \text{ at } f = f_C}{P_O \text{ at } f = 1 \text{ MHz}} = -3$$

3. A light detection element uses a silicon diode have proofread a load with a standard device.

4. LED might radiate red light under large current drive.

■ Package (Unit: mm)

LEXLTN2S0001




- Pin name
  1: Anode
  2: Cathode

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